vegetables grown in the Chicago market-garden area are normally marketed in second-hand containers. The proportion, of course, becomes less as the distance from the city increases, but information collected by Cornell University indicates that in normal times, growers in some of the interior counties of New York State depend on used containers for as much as 35 percent of their total package requirements. Current stock piling of used containers on farms in this area indicates a far more extensive use of this material.

Collection Groups

In the larger cities used containers are collected by a number of agencies. Farmers who live in the nearby districts collect some from the retail stores direct. Many peddlers collect the empty containers from retailers and restaurants. Second-hand dealers or "junkies" arrange with trash collectors to segregate good containers from other material.

Chain stores continue to be the largest organized group collecting used containers. Another potential source of appreciable supplies is the independent wholesale and retail distributors working together to save serviceable containers and get them back into circulation. Under this plan the retailers conserve and segregate the packages which are picked up by the trucker who delivers produce to the store. Retailers who go to market with their own trucks carry the salvaged containers to established accumulators.

Used-package dealers buy containers from "junkies," peddlers, chain stores, and other accumulators, and sort them into the various types. These dealers repair damaged packages and remake others into types more generally in demand. The dealers resell the sorted and repaired packages to farmers in the nearby districts, or ship them to other production centers.

Remaking and Reconditioning

The remaking of other types of containers from such packages as citrus and apple boxes has become an established business in the larger cities. From material in these boxes, crates are made for the packing of cabbage, beans, carrots, onions, and other vegetables.

Reconditioning, as well as remaking, is an important enterprise. Reclaimed pieces of containers, and second-hand nails and wire are used to repair damaged hampers, baskets, or covers. However, when help is scarce, remaking may be less practical, and many growers learn to utilize the containers "as is."

It should be remembered that in conserving for re-use, careful handling by dealers all along the line to prevent needless damage is important. Many parts of potentially good containers, which might be used, are thrown on fires in the markets on cold mornings. This is one practice that should be stopped.

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war demands

SALVAGE and RE-USE of FRUIT and VEGETABLE CONTAINERS

AWI.-33

Supplies Are Short

Packaging materials for new containers are scarce. Available materials, formerly used freely by container manufacturers, must now be shared with other essential war industries. Therefore, supplies for fruit and vegetable containers are short, but the demand is high because of the increase in food production.

This situation necessitates the fullest use of our materials—particularly through the salvage and re-use of old containers. The industry must make the most of what is available.

General Lumber Situation

Since 1940, demand for lumber has increased because of stepped-up military needs while production has decreased as a result of labor and equipment shortages. Production for all purposes in 1943 was only 95 percent of that in 1940, and in each year from 1940 to 1943 it failed to equal consumption. In 1940 the deficit was about 20 percent, and in 1943, despite restricted use of lumber, it was about 12 percent. During these years, the national reserve inventory of about 16 billion feet dropped to less than 6 billion feet and it consists of lumber mostly of large-dimension stock.

The minimum essential requirements for lumber for military and civilian needs are approximately 34½ billion feet. This is about the quantity produced in 1943, but over 4 billion feet less than that actually consumed in that year. Half of this will be needed for containers and dunnage. Therefore half of the output of every sawmill in the country must be in lumber of small dimensions. Because of the extra operations involved, this requirement may cause decreased over-all production.

Fruit and Vegetable Containers

The 17 billion board feet of lumber required for containers and shipping material for 1944 will be about 17 percent more than the consumption in 1943, and 100 percent more than in 1942. Most of this increase is for military shipments. Some goods are packed in wooden containers as a result of the scarcity of other packaging materials. Other types of supplies are being put in wooden packages in order to obtain a more substantial container for overseas shipment.

The container picture for fresh fruits and vegetables is not a bright one. Producers of fruits and vegetables will likely have to get along with fewer wooden containers in 1944 than they did in 1943 and with a considerably smaller quantity than in 1942.

Container manufacturers in the Eastern States have indicated that the output in 1944 of round stave baskets and hampers will be about 10 and 25 percent, respectively, below that of 1943. Production of crates and boxes for fresh fruits and vegetables in this area is not expected to exceed that in 1943. The carry-over of all containers from 1943 is less than normal and not sufficient to avert a tight package situation.

Used Containers

Careful salvage and re-use of second-hand packages will supplement the supply of new fruit and vegetable containers. Every container that is salvaged for re-use aids the general supply situation and the war effort. Such a container may package a product which otherwise might not be made available to consumers. And the use of the salvaged package will release for other purposes the labor and equipment necessary to make a new box or basket. In addition, such critical materials as wood and metal will be released for use in other war activities.

Because of the many possibilities of salvaging used containers, the amount of critical materials to be saved is considerable. For instance, 1,000 salvaged apple boxes contain enough board feet of wood to crate an average airplane for overseas shipment. Metal in 60 wire-bound citrus boxes can supply the nails and straps for crating a jeep for overseas shipment. One thousand wire-bound citrus boxes have about 500 pounds of metal. Thus, if a quarter of the 18,000,000 new wire-bound citrus boxes used each year were salvaged and re-used, 2,250,000 pounds of metal would be released for shells, tanks, and guns. This saving also would benefit growers, who may have difficulty in obtaining supplies of wire and nails.

Large Markets Make Showing

Extensive work has already been done in salvaging used containers, particularly in the larger markets. Detailed information is, of course, limited, but there is reason to believe that a large part of all re-usable wooden fruit and vegetable containers which are shipped into these markets is being or could be reclaimed. The percentage varies with the different types of containers, being very high for such packages as baskets and wire-bound crates and much lower for nailed boxes. Because of demand, however, the volume of nailed containers salvaged has been materially increased in recent months. It has been demonstrated that the extent to which any container is salvaged depends on whether there is an assured market for it. Thus, this year, literally hundreds of carloads of used nailed lettuce crates, tomato lugs, nailed citrus boxes, and similar bulky containers have been returned for re-use in the Pacific Coast, Gulf and South Atlantic States.

Second-hand containers are more extensively used by growers in the nearby or market-garden areas than in the distant producing districts because of the difficulty and expense of shipping such containers to distant producing centers. Some estimates indicate that as much as 60 percent of the

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